Please amend the paragraph beginning in Column 82, line 23 as follows:

The present invention will be advantageous for use with a satellite or terrestrial broadcast service which is essential to run in the same standards for as long as 50 years. During the service period, the broadcast standards must not be altered but improvements will be provided time to time corresponding to up-to-date technological achievements. Particularly, the energy for signal transmission will surely be increased on any satellite. Each TV station should provide a compatible service for guaranteeing TV program signal reception to any type receivers ranging from today's common ones to future advanced ones. The signal transmission system of the present invention can provide a compatible broadcast service of both the existing NTSC and HDTV systems and also, ensure a future extension to match mass [date] <u>data</u> transmission.

Please amend the paragraph beginning in Column 82, line 38 as follows:

The present invention concerns much on the frequency utilization than the energy utilization. The signal receiving sensitivity of each receiver is arranged [different] <u>differently</u> depending on a signal state level to be received so that the transmitting power of a transmitter needs not be increased largely. Hence, existing satellites which offer a small energy for reception and transmission of a signal can best be used with the system of the present invention. The system is also arranged for performing the same standards corresponding to an increase in the transmission energy in the future and offering the compatibility between old and new type receivers. In addition, the present invention will be more advantageous for use with the satellite broadcast standards.

<u>IN THE CLAIMS:</u>

Please cancel claims 24-29 without prejudice or disclaimer of the subject matter therein, and add new claims 30-35 as follows.

<u>30. A signal transmission apparatus for transmitting a first data stream and a second data stream, comprising:</u>

- a first error correction code (ECC) encoder operable to ECC encode the first data stream to produce an ECC encoded first data stream, wherein said first ECC encoder is a BCH encoder,

- a second error correction code (ECC) encoder operable to ECC encode the second data stream to produce an ECC encoded second data stream, wherein said second ECC encoder is a Reed Solomon encoder,

- a modulator operable to assign the ECC encoded first data stream and the ECC encoded second data stream to a respective constellation in a vector space diagram to produce modulated signals wherein the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream, and

- a transmitter operable to transmit the modulated signals,

wherein the first data stream has data for demodulation for demodulating the modulated signals corresponding to the second data stream.

31. A signal receiving apparatus, comprising:

- a demodulator operable to demodulate a received signal to produce an ECC encoded first data stream and an ECC encoded second data stream, the received signal having information of a first data stream and a second data stream, both of which are ECC-encoded, wherein each ECC encoded data stream is assigned to a respective constellation in a vector space diagram and the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream,

the first data stream having data for demodulation for demodulating the modulated signals corresponding to the second data stream,

wherein said demodulator produces the ECC encoded second data stream according to the data for demodulation;

- a first error correction code (ECC) decoder operable to ECC decode the ECC encoded first data stream to produce the first data stream, wherein said first ECC decoder is a BCH decoder, and

- a second error correction code (ECC) decoder operable to ECC decode the ECC encoded second data stream to produce the second data stream, wherein said second ECC decoder is a Reed Solomon decoder.

32. A signal transmission system comprising a signal transmission apparatus for transmitting a first data stream and a second data stream, and signal receiving apparatus,

said signal transmission apparatus comprising:

- a first error correction code (ECC) encoder operable to ECC encode the first data stream to produce an ECC encoded first data stream, wherein said first ECC encoder is a BCH encoder,

- a second error correction code (ECC) encoder operable to ECC encode the second data stream to produce an ECC encoded second data stream, wherein said second ECC encoder is a Reed Solomon encoder,

- a modulator operable to assign the ECC encoded first data stream and the ECC encoded second data stream to a respective constellation in a vector space diagram to produce modulated signals wherein the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream, and

- a transmitter operable to transmit the modulated signals,

wherein the first data stream has data for demodulation for demodulating the modulated signals corresponding to the second data stream;

said signal receiving apparatus comprising:

- a demodulator operable to demodulate a received signal to produce the ECC encoded first data stream and the ECC encoded second data stream, wherein said demodulator produces the ECC encoded second data stream according to the data for demodulation;

- a first error correction code (ECC) decoder operable to ECC decode the ECC encoded first data stream to produce the first data stream, wherein said first ECC decoder is a BCH decoder, and

- a second error correction code (ECC) decoder operable to ECC decode the ECC encoded second data stream to produce the second data stream, wherein said second ECC decoder is a Reed Solomon decoder.

33. A signal transmission method for transmitting a first data stream and a second data stream, comprising:

- first error correction code (ECC) encoding the first data stream to produce an ECC encoded first data stream, wherein said first ECC encoding is a BCH encoding,

- second error correction code (ECC) encoding the second data stream to produce an ECC encoded second data stream, wherein said second ECC encoding is a Reed Solomon encoding,

- assigning the ECC encoded first data stream and the ECC encoded second data stream to a respective constellation in a vector space diagram to produce modulated signals wherein the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream, and

- transmitting the modulated signals,

wherein the first data stream has data for demodulation for demodulating the modulated signals corresponding to the second data stream.

34. A signal receiving method, comprising:

- demodulating a received signal to produce an ECC encoded first data stream and an ECC encoded second data stream, the received signal having information of a first data stream and a second data stream, both of which are ECC-encoded, wherein each ECC encoded data stream is assigned to a respective constellation in a vector space diagram and the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream,

the first data stream having data for demodulation for demodulating the modulated signals corresponding to the second data stream,

wherein said demodulating produces the ECC encoded second data stream according to the data for demodulation,

- first error correction code (ECC) decoding the ECC encoded first data stream to produce the first data stream, wherein said first ECC decoding is a BCH decoding, and

- second error correction code (ECC) decoding the ECC encoded second data stream to produce the second data stream, wherein said second ECC decoding is a Reed Solomon decoding.

35. A signal transmitting and receiving method comprising a signal transmission method for transmitting a first data stream and a second data stream, and signal receiving method,

said signal transmission method comprising:

- first error correction code (ECC) encoding the first data stream to produce an ECC encoded first data stream, wherein said first ECC encoding is a BCH encoding,

- second error correction code (ECC) encoding the second data stream to produce an ECC encoded second data stream, wherein said second ECC encoding is a Reed Solomon encoding,

- assigning the ECC encoded first data stream and the ECC encoded second data stream to a respective constellation in a vector space diagram to produce modulated signals wherein the number of signal points of the constellation for the ECC encoded first data stream is different from the number of signal points of the constellation for the ECC encoded second data stream, and

- transmitting the modulated signals,

wherein the first data stream has data for demodulation for demodulating the modulated signals corresponding to the second data stream;

said signal receiving method comprising:

- demodulating a received signal to produce the ECC encoded first data stream and the ECC encoded second data stream, wherein said demodulating produces the ECC encoded second data stream according to the data for demodulation,

- first error correction code (ECC) decoding the ECC encoded first data stream to produce the first data stream, wherein said first ECC decoding is a BCH decoding, and

- second error correction code (ECC) decoding the ECC encoded second data stream to produce the second data stream, wherein said second ECC decoding is a Reed Solomon decoding.